DOCUMENT RESUME

ED 299 465 CG 021 110

AUTHOR Bastida, Elena M.; O'Flaherty, Kathleen M.
TITLE The Impact of Community Structure on the Status of the Elderly.
PUB DATE Nov 87
NOTE 15p.; Paper presented at the Annual Scientific Meeting of the Gerontological Society (40th, Washington, DC, November 18-22, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Demography; *Economic Factors; Health Services; *Human Services; Income; *Older Adults; Political Power; Population Trends; *Rural Urban Differences; *Social Environment; Social Structure

ABSTRACT

This study examined the underlying influence of the social context, as measured by selected structural characteristics, on the resources available to the elderly in 99 counties across Kansas, Missouri, New Mexico, and Arkansas. These four states were chosen because each reflected national patterns for age concentrations and for the historical development of aging programs and each exhibited variations in urban/rural population, migration patterns, socioeconomic structure, and ethnic concentration. Data on economic, demographic, health care, and political structures were taken from the 1980 United States Census of the Population and the 1983 County and City Data Book. Additional data were provided by the four state associations for hospitals and nursing homes. Data analysis indicated that the rural elderly were a unique population group, living farther from needed services, especially health care services. They lived in more age dependent populations and were older, poorer, and more likely to live in economically depressed communities than were the urban elderly. In general, demographic and economic indicators were the strongest predictors in analyses, explaining as much as 63% of the variance in median income residents 65 years of age and older. The importance of the social context was verified by the study. The political structure, however, was not as strong a predictor in the models as might have been anticipated. (NB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED299465

The Impact of Community Structure on the Status of the Elderly

by

Dr. Elena M. Bastida

Dr. Kathleen O'Flaherty

The Wichita State University

CG 021110

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

K. M. O'Flaherty

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

STATEMENT OF THE PROBLEM

This study examines the underlying influence of the social context, as measured by selected structural characteristics, on the resources available to the elderly in 99 counties across a four state area that includes Kansas, Missouri, New Mexico and Arkansas. Special attention is given to patterns of income distribution, access to health care facilities and their utilization and access to lobbying and advocacy organizations. A structural perspective is employed based on the assumption that community resources are distributed a as a function of individual characteristics.

In discussing the social context in which the aging interact and in which aging programs exist, it becomes important to examine how access to resources may vary given the structural characteristics of the community of residence. Put simply, there is a phenomenon of community context that has consequences, or so we have assumed, for the status of the elderly. Since community and regional structures as significant analytical variables have not been systematically addressed in the gerontological literature, the assumptions that have guided the framing of this research problem and the development of the various models presented in this paper are exploratory. The findings discussed below, however, should bring a fresh approach to the study of accessibility and utilization for they provide the reader with important information on some critical issues pertaining to the social context of the community in which the aging interact and in which aging programs exist. In addition, variants of the social environmental perspective are being developed by gerontologists to explain both individual or structural levels of personal well being (Hendricks and Hendricks, 1986). The findings discussed here

should contribute valuable empirical information toward the further development of this current theoretical formulation

METHODS

Sample

The four state targeted area was chosen for two key methodological reasons. First, each of the states reflects national patterns for age concentrations and for the historical development of aging programs. Second, each of the states selected exhibited variations in urban/rural population, migration patterns, socioeconomic structure and ethnic concentration. Within these states, counties were stratified along three population criteria: 1) population density; 2) age concentration of the 65 and older population and 3) ethnic concentration of 5 percent or more of at least one of the targeted minority populations (Black, Hispanic and/or Native American).

Data Source

The vast majority of data presented in this study was taken from volumes of the 1980 U.S. Census of the Population and the 1983 County and City Data Book. From these sources were extracted data that tap the four major dimensions of community organization to be studied: economic structure, demographic structure, health care structure and political structure. Additional data was also provided by the four state associations for hospitals and nursing homes. Using these resources, a test will be made of the proposition that a community's structural characteristics directly impinge upon the status of the elderly and the resources that are available to them as well as their level of political/lobbying involvement.

FINDINGS

Demographic Profile of Counties

Tables 1 and 2 contain demographic characteristics of the counties under investigation. The total population of the counties encompassed by the study is 5,108,665 or a mean average of 51,602 per county. As Table 2 indicates, the median percent urban for the study counties is 45.3 percent. The median percent age 65 and over is 14.1 percent while the median percent black and white are .76 percent and 91.60 percent respectively.

(Tables 1 and 2 about here)

Multivariate Analysis

A. Health Care

The initial question investigated was whether there was a relationship between the percent of the population age 65 and over and the percent of a county's expenditures allocated to health care and hospitals. The zero-order Pearson correlation coefficient between these variables was .16, indicating a weak positive relationship. Percent 65 and older was then recoded into three categories: under 12 percent, 12 to 19 percent, and over 19 percent. Within each of these categories, the mean percent of county's expenditures for health was calculated. In counties with less than 12 percent of the population over 65, the mean percent spent on health care was 5.4 percent. In the remaining two categories, a mean of 9.5 percent was spent on health care. The difference between these means was statistically significant at the .05 level (t=1.911, df=67, one-tailed) indicating that in counties having higher than the national average percent 65 and older more of the county's money is spent on

health care. In addition, typically as health care expenditures increase, the percent spent on education decreases. While this pattern was evident in this data set, none of the mean percent decreases in amount spent on education were statistically significant.

Shifting focus to the accessibility of health care services and facilities, over 80 percent of all counties had a home health care agency within their boundaries. In addition, there was, in the majority of counties, a hospital and at least one nursing home. Only 15 counties (15.2 percent) did not have a nursing home. The same percentage, 15.2 percent, did not have a hospital. The median number of hospitals per county equaled one while the median number of nursing homes equaled three. In attempts to model the variables that influence the number of hospitals and nursing homes in a county, the variable total population in the county correlated at the .91 and .87 level respectively with the number of each facility. Eighty-three percent of the variation in the number of hospitals in a county and 76 percent of the variation in the number of nursing homes is attributable to that one sole factor.

Given the overpowering influence of this one variable, and the theoretical assumptions of this study, regression models were run which excluded the total population variable and also the variable percent urban, due to its collinearity with total population. When these variables are excluded, economic indicators define the models generated to predict the number of hospitals and nursing homes in a county. Columns 1 and 2 of Table 3 present standardized and unstandardized coefficients for the models estimating the number of hospitals and nursing homes in a county. Note that

the same variables define each model. The model presented for hospitals accounts for 14 percent of the variation while the model for nursing homes accounts for 20 percent of the variation.

B. Supplemental Security Income

Factors influencing the amount of Supplemental Security Income (SSI) paid within a county were examined next. Given the extremely high correlation, .87, between this variable and the total population in a county, the counties were subdivided according to population size and separate models were generated. The counties were subdivided into four size categories: less than 10,000 (N=30), 10,000-40,000 (N=38), 40,000-100,000 (N=20) and above 100,000 (N=11).

Column 1 of Table 4 contains the model fitted for those counties with populations under 10,000. In this two variable model, percent employed in sales and percent Spanish accounted for 60 percent of the variation in the dependent variable. Note the beta weights for both variables are virtually identical in magnitude, suggesting equal importance in understanding the dependent variable, Supplemental Security Income.

Column 2 of Table 4 contains the model fitted for counties size 10,000-40,000. Again, a two variable model was generated. This model explains 38 percent of the variation in the amount of SSI paid within this subset of counties. Percent white is the more influential of the two variables. The lower the percent white, the higher the amount of SSI paid.

In counties with population size 40,000-100,000, the Pearson correlation coefficient between percent white and SSI payments equaled -.70 and in counties with population total over 100,000 the coefficient equaled -.78. This

increasing inverse correlation eliminates percent white from inclusion in the regression models because the beta weight for the variable exceeds one. This suggests that the 2 variables are simultaneously tapping the same construct.

As column 3 of Table 4 indicates, the only variable that significantly explains (R square = .42) SSI payments in counties size 40,000-10,000 is median income for persons age 65 and over. Due to the small number of counties with populations above 100,000, regression analysis was not attempted. Examination of Pearson correlations suggests that percent black .61, percent Spanish .43, and percent Indian .37 the racial/ethnic indicators, would be the most influential.

C. Median Income Residents 65+

Median income of county residents age 65 and older was the next dependent variable investigated. Table 5 contains the best fitting model generated for this variable. Overall this model, which shows an interplay of demographic and economic factors, explains 63 percent of the variation in the dependent variable. Total population in the county and percent of the population that is white in a county are the only variables that positively relate to median income 65+. All of the other variables have negative coefficients with the variable percent of the population age 65 and over having the largest beta weight, -.518. This suggests that the lower the percent unemployed, the lower the percent employed in manufacturing or sales and the lower the percent of Hispanic origin, the higher the median income of county residents age 65 and above. Of particular note in this model is the presence of the variable percent employed in manufacturing. While previous literature would lead one to anticipate the presence of all the other variables

in the model, the manufacturing variable is an anomaly. Even after controlling for the variable percent females age 65 and over, the manufacturing variable remained as a significant contribution to the model.

D. Lobbying or Advocacy Organizations

Factors influencing the presence of and membership in a lobbying or advocacy organization, specifically the American Association of Retired Persons (AARP), were the last dependent variables investigated. Forty-two counties (42.4 percent) had at least one AARP chapter in the county. Generally, the larger the total population of a county, the more likely it was to have an AARP chapter (r=.77). For example, only 5 of the 42 counties with a population under 15,000 had a chapter while 100 percent of all counties with a population over 100,000 had a chapter.

The vast majority of AARP members, however, do not belong to a chapter. Given this fact, the decision was made to investigate what structural characteristics influence membership while controlling for total population of the county. As in earlier parts of the analysis, the counties were subdivided into 4 categories: less than 15,000, 15,000-40,000, 40,000-100,000 and above 100,000. Note, however, the shift of the boundaries of the two lowest categories. This was done to include the least populated Arkansas counties in the lowest population category. None of them have less than 10,000 people, the cutoff for other purposes, but a number have less than 15,000.

In the three smallest population categories, while various combinations of independent variables were tested in regression runs, single variables were the best significant predictors of membership in AARP. All of these predictor variables were economic indicators. In the counties with less than 15,000,

percent employed in manufacturing was the predictor variable. Pearson's r equaled .35 between these two variables which means that slightly less than 12 percent of the variation in the dependent variable was explained. In the 15,000-40,000 counties, the number of individual or family farms was negatively related to membership. Pearson's r was -.44, which, when squared, indicates that 20 percent of the variation in AARP membership is explained by this one variable. Percent self-employed was strongly and positively correlated, .64, with membership in counties sized 40,000-100,000. This one variable accounts for 41 percent of the variation in AARP membership totals in these counties.

Regression analysis was not attempted on counties with populations over 100,000 due to the small number of cases. Examination of Pearson correlation coefficients for these counties indicates a strong, inverse relationship between percent white in the county and AARP membership totals. The coefficient equalled -.62. It is interesting that demographic characteristics (i.e., percent urban, percent Hispanic) rather than economic indicators had the strongest bivariate correlations with AARP in these largest counties.

DISCUSSION

In general, the strongest, most dominating factor in the study was the size of the population. As indicated in the findings section, every attempt was made to control for this factor, yet it remained a powerful variable in spite of these attempts.

Data analysis indicates that the rural elderly are a unique population group. That is, they live farther from the services they need, especially health care services. They live in more age dependent populations. They are

older than the urban elderly. In general, they are poorer and they are more likely to live in economically depressed communities. We can only speculate that since the data examined were from the 1980 Census, their unique situation has exacerbated in the years that have elapsed. During the intervening years the agriculture and the oil industries have declined. In several of the counties selected for investigation, banks have foreclosed and other essential retail outlets such as grocery stores and gas stations have closed permanently.

In general demographic and economic indicators were the strongest predictors in both the correlation and regression analyses. These two sets of indicators explained as much as 63 percent of the variance in median income 65+. Thus the initial assumption about the importance of the social context is verified by the data analysis. However the political structure was not as a strong a predictor in the models as might have been anticipated.

In examining the various subgroups of counties according to population, the 10,000-40,000 groups deserves further investigation. It appears that the urban/rural distinction is manifested at some point within this range of population. Further research of this group could determine the critical factors that account for the urban/rural difference. For example, some of the questions that could be examined are:

> is it only size or population density that accounts for the dichotomy; or do economic factors play a significant role; or finally, is it the heterogeneity of the population?

Another area that could be further defined is the spending of the health care dollar. Currently available data track where the dollars are spent,

not the beneficiary's data track where the dollars are spent, not the beneficiary's place of residence. This will be an increasingly important question for future policy making as concern over cost effectiveness of dollars spent heighten.

TABLE 1. SELECTED DEMOGRAPHIC CHARACTERISTICS OF STUDIED COUNTIES IN FOUR STATE AREA

County Size (000)	Population					
	Total	Black	American Indian	Hispanic	65 Years and Over	% 65+
Under 10	186,366	331	635	19,476	39,551	21.2
10 to 40	802,059	76,293	18,553	109,677	114,439	14.3
40 to 100	1,243,950	93,285	56,925	165,682	123,186	9.9
Over 100	2,876,290	315,505	22,863	208,959	288,447	10.0
Total	5,108,665	485,414	98,976	503,794	565,623	11.1

TABLE 2. DESCRIPTIVE STATISTICS OF SELECTED DEMOGRAPHIC CHARACTERISTICS

	Mean	Mode	Median	S.D.
Total Population	51,602	1,845	19,672	93,802
Percent Urban	41.73	.00	45.30	29.87
Percent White	87.12	99.70	91.60	73.70
Percent Black	6.24	.00	.76	10.62
Percent Indian	1.86	.10	.38	7.32
Percent Spanish	12.03	.63	.91	21.44
Percent 65 and Over	15.17	12.00	14.10	6.43
Percent 85 and Over	1.46	1.20	.82	1.20

TABLE 3. UNSTANDARDIZED AND STANDARDIZED COEFFICIENTS FOR NUMBER OF HOSPITALS AND NURSING HOMES IN A COUNTY*

	(1)	(2)
Percent self-employed	-.123**	.001**
	-.328	.403
Median income 65+	.001**	.188**
	.291	.285
Intercept	-.070	-10.384

*standardized coefficients are below unstandardized coefficients

** p <= .003

TABLE 4. UNSTANDARDIZED AND STANDARDIZED COEFFICIENTS FOR ESTIMATES OF SUPPLEMENTAL SECURITY INCOME PAID IN A COUNTY BY COUNTY SIZE*

	Less Than 10,000	10,000 to 40,000	40,000 to 100,000
Percent Employed in Sales	5.413**		
	.478		
Percent Spanish	.901**		
	.465		
Percent White		-1.827**	
		-.495	
Per capita income		-.008**	
		-.316	
Median Income 65+			-.036**
			-.648
Intercept	-91.14	295.69	541.13

*Standardized coefficients are below unstandardized coefficients
** p <= .002
***p <= .05

TABLE 5. UNSTANDARDIZED COEFFICIENTS FOR MEDIAN INCOME POPULATION 65+ AND OVER IN A COUNTY.*1

Percent Unemployed	-194.337** -.230
Percent 65+	-201.869*** -.518
Percent White	62.838*** .365
Total Population in a County	.008*** .305
Percent Employed in Manufacturing	-87.263*** .361
Percent Hispanic	-29.809** -.255
Percent Employed in Sales	-111.152** -.163
Intercept	12628.45

*Standardized coefficients are below unstandardized coefficients

1 The addition of each variable significantly increased the R square.

** p <= .03

***p <= .0001